

Thursday, December 17, 2015 3:43:25 PM

Item ID: D4909-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Support

Start Date: 12/17/2015 **Start Qty:** 4.00

4

Cust Item ID:**Required Date:** 12/17/2015 **Req'd Qty:** 4.00

4

Customer:

Reference:

Run Start *NR1*

Approvals: _____ **Process Plan:** MLJ **Date:** DEC 18 2015

Tooling:

Date:

QC: _____ Date: _____ SPC (Y/N): _____

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4909	A

0.02

100

HAAS CNC VERTICAL MACHINING #1

0.04

HAAS 1

Memo

HAAS CNC vertical machine #1

Machine as per Folio FB209

Folio Rev: AA

Dwg Rev: A

Debug

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

Work Order ID 140154

Thursday, December 17, 2015 3:43:25 PM

140154

Page 2

Item ID: D4909-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Support
Start Date: 12/17/2015 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 12/17/2015 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							DAS 08 9-88
120									
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location: <u>LG53</u>	0.00							DAS 41 9-89
130									
Packaging	Memo	0.00							
Packaging	LOCATION : LG053								16-2-11
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.01							
Quality Control									

Sal 20160212

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Picklist Print

Thursday, December 17, 2015 3:43:25 PM

Page 1

Work Order ID: 140154

140154

Parent Item: D4909-1

D4909-1

Parent Item Name: Support

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISUE 13-04-24 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4909-1TRN

Manufactured

No

100

Each

5.0000

1

4

D4909-1TRN

Support Turning Detail

Location

Loc Qty

Loc Code

MAT060

5

130606

5

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

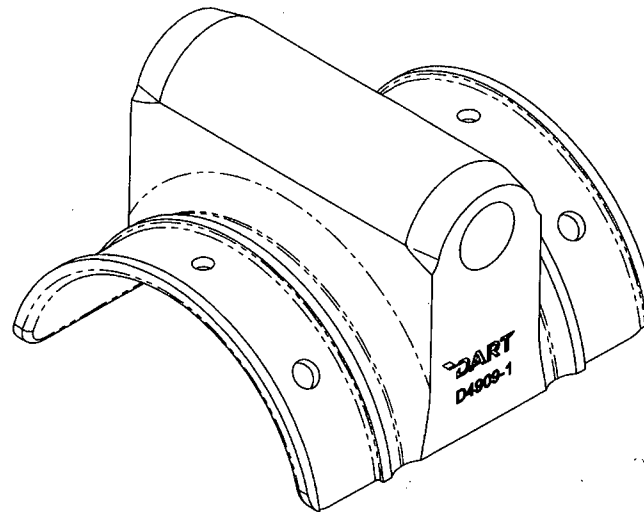
DART AEROSPACE LTD		Work Order:	140154
Description: Support		Part Number:	D4909-1
Inspection Dwg: D4909	Rev: A	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
Milling Section								
A-A	1.051	1.071		1.060	1.058	1.060	1.057	
B-B	0.513	0.533		0.522	0.524	0.525	0.528	
C-C	R0.053	R0.073		0.063	0.063	0.063	0.063	
D-D	2.465	2.485		2.474	2.473	2.476	2.475	
E-E	3.550	3.560		3.559	3.558	3.558	3.558	
F-F	0.315 x 0.065	0.335 x 0.085		0.325 0.075	0.325 0.075	0.325 0.075	0.325 0.075	
G-G	1.990	2.010		2.000	2.000	2.000	2.000	
H-H	0.625	0.630		0.625	0.625	0.625	0.625	
I-I	R0.645	R0.660		R0.650	R0.650	R0.650	R0.650	
J-J	R0.220	R0.280		R0.250	R0.250	R0.250	R0.250	
K-K	0.620	0.630		0.001	0.003	0.001	0.0005	
L-L								
M-M								
N-N								
O-O								
P-P								
Q-Q								
R-R								
Accept/Reject								

Measured by:	<i>[Signature]</i>	Date:	16/02/10
Audited by:	<i>[Signature]</i>	Date:	16/02/11
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	14.07.07	New Issue	KJ	<i>[Signature]</i>



D4909-1 SUPPORT

SHOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

140154 MJS
15-12-18

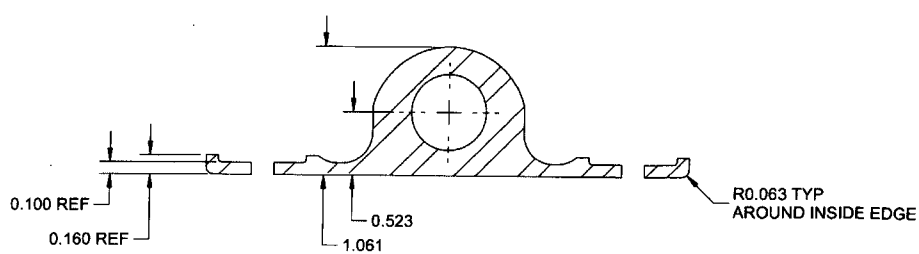
RELEASED
2013-08-06
JW

NOTES:

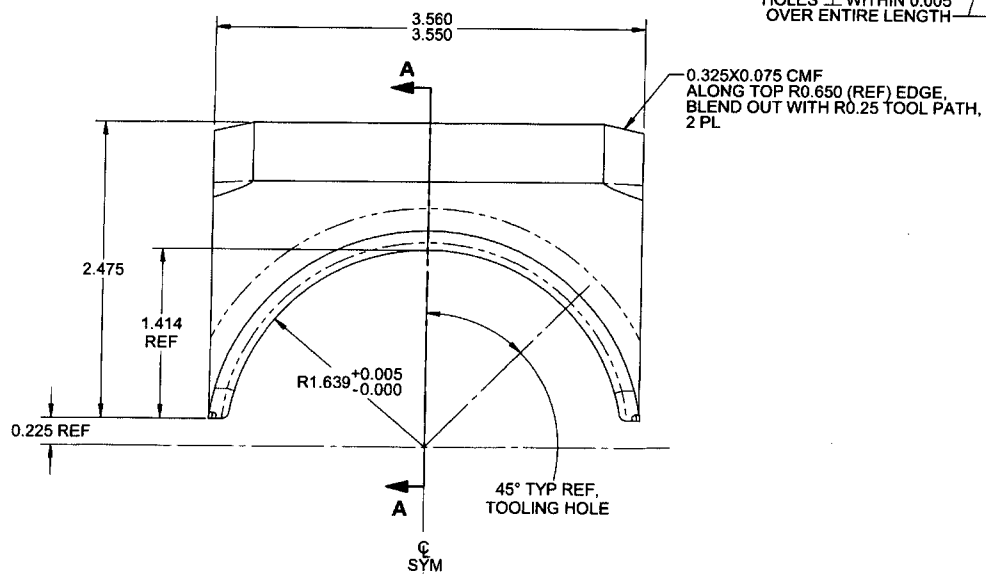
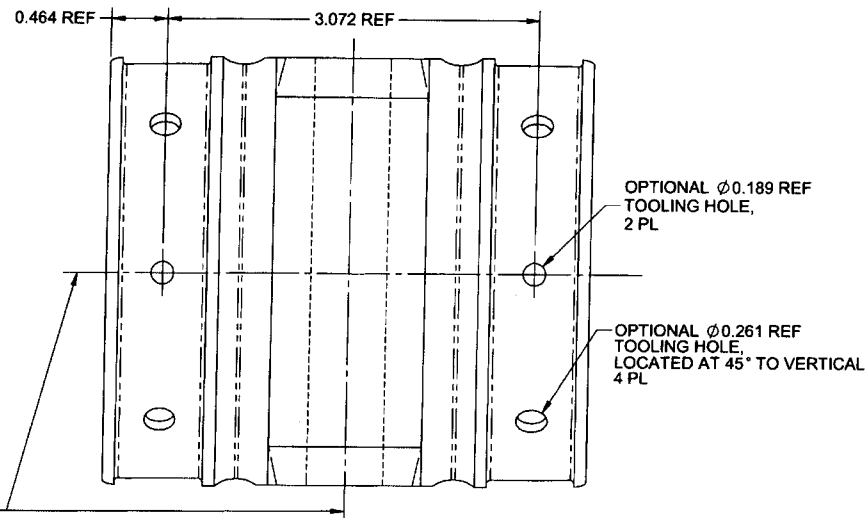
- 1) MATERIAL: MAKE FROM D4909-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART LOGO AND P/N "D4909-1" IN INDICATED AREA
USING 0.125 HIGH X 0.010-0.020 DEEP LETTERING PER DART QSI 044 6.3,
IDENTIFY WITH DART B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.90 lbs

A NEW ISSUE		CP	13.04.08
REV.	DESCRIPTION	BY	DATE
DESIGN	 DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	REV. A	
DRAWN		SHEET 1 OF 3	
CHECKED		DRAWING NO. D4909	
MFG. APPR.		TITLE	
APPROVED		SCALE	
DE APPR.	 SUPPORT	NTS	
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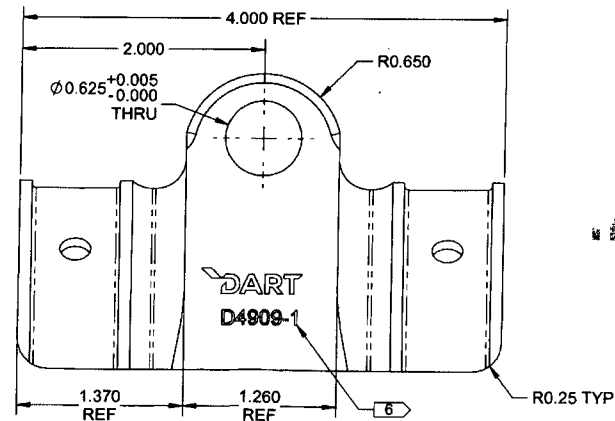
8 7 6 5 4 3 2 1



SECTION A-A
SCALE 1X



D4909-1 SUPPORT



RELEASED
2013-08-06

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4909	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT	NTS
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8 7 6 5 4 3 2 1

